

ABSTRACT

The present invention relates to a power testing facility system of a train and a testing method using the same. In the present invention, there are provided a test bed for engaging a testing object, a DC power facility formed of a converter
5 transformer and DC power converter, an AC power facility formed of a phase balancing apparatus, a voltage regulating transformer, and a power factor improving apparatus, a load facility formed of an induction generator and a bi-directional inverter, a measuring apparatus for measuring various characteristics of a propulsion apparatus, and a control apparatus for controlling the entire system.
10 With the above elements, it is possible to implement a type test, a combination test and a train operation simulation test using a facility system adapted to test a power of a train. When selecting an instrument installed in a train, it is implement a desired reliability by testing a previously fabricated product. The facility is economically operated, and an operation cost is minimized. An easier
15 maintenance is implemented. An electrical energy may be restored using a bi-directional inverter. A power loss is decreased. It is possible to prevent an indoor temperature increase.